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"Advancing the Internet of Things in Rural America"

Before the U.S. Senate Committee on Commerce, Science and Transportation Subcommittee on Subcommittee on Communications, Technology, Innovation, and the Internet

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Good morning Senators. I would like to thank Subcommittee Chairman Wicker, Ranking Member Schatz, Senator Deb Fischer and all of the members of the subcommittee for this opportunity to testify at today's hearing.

My name is Tim Hassinger. I am the president and chief executive officer of Nebraska-based Lindsay Corporation – a leading manufacturer of center pivot and lateral move agricultural irrigation systems. For more than 50 years, Lindsay Corporation has been at the forefront of research and the development of products and services designed to meet the world's rapidly growing agriculture and transportation needs.

It's an honor and a privilege to be here today representing my company and the agriculture industry. I would like to thank Senator Fischer for inviting me to speak about the important role broadband access plays in the agriculture industry – on operations of all sizes in all regions of the country.

As you may know, it's estimated that by 2050, the global demand for food will be 60 percent higher than it is today. To meet this daunting challenge, it's imperative that we develop and deploy technologies that will help growers produce more with less, while preserving water and other natural resources.

Broadband access is the key to unlocking the power of those technologies.

Respectfully, Senators – could you do your job without access to the Internet?

Probably not – and neither can our nation's farmers.

Like all business owners, farmers need to be online. The Internet fuels the innovative, advanced technology that will help them meet the food, fuel and fiber needs of the rapidly growing global population.

With the touch of a button or swipe of a finger, farmers who have broadband access can:

- Receive commodity price information
- Monitor and respond to changing weather conditions
- Use GPS for planting and irrigation management
- Get real time data on soil and moisture conditions
- Connect with other farmers and agriculture experts, and
- Store and analyze data to increase sustainability and productivity

They can also take advantage of a myriad of new technologies now available from Lindsay Corporation and other American manufacturers. Among other things, these innovations enable remote data collection, transfer and analysis from connected devices like soil moisture sensors, weather stations and cloud-based support tools. Farmers are using this information to streamline their operations, maximize efficiency and increase productivity.

We work with farmers every day, so we know the power that comes with the ability to leverage big data. We now offer technology that helps farmers decide precisely when, where and how much to irrigate – maximizing yields while reducing overwatering and related input costs and nutrient losses.

In recently conducted field studies, our researchers found that remote telemetry streamlined growing operations in several key ways, including:

- 3% increase in corn yield (driving profit of \$25 per acre)
- 17% reduction in <u>water usage</u> (saving more than 9.25 million gallons on a 130 acre field)
- \$10/acre reduction in energy costs
- 75% reduction in <u>time</u> spent going back and forth to the fields (another \$5/acre saved)

This combination of yield enhancement and resource savings can increase American farmers' profits by an average of \$40 per acre – profits that can be reinvested in their operation and in their local economy.

For farmers across the country, these technologies are no longer luxuries. Rather, they are critical tools needed to increase the overall operational efficiency and productivity needed to complete in the global marketplace.

However, farmers can only employ these connected tools if they have reliable, high-speed Internet access – and, for an estimated 39 percent of the rural population (23.4 million Americans), it's simply not available.

While cities and municipalities typically have access to several high-speed Internet service providers, that access often ends at the county line. Those living in rural communities depend on radio networks, satellite or cell service – all of which typically operate at lower speeds, limiting connectivity.

It's a competitive world, and many people living in rural communities feel like they're being left behind – that they're not operating on a level playing field.

In order for those communities and our country to thrive and compete in the global marketplace, we must bridge that digital divide.

With rural broadband access, business owners will have access to new markets and employees; health care workers will be able access advanced equipment; students will be afforded new educational opportunities; and farmers will be able to take advantage of emerging technologies that will help them increase yields while conserving water and other natural resources.